

WHAT IS CLAIMED IS:

1. An apparatus comprising:
 - a first base; and
 - a plurality of modules each having an identity,said base and modules comprising circuitry wherein:
 - when a first module is attached to the first base, and
 - an arbitrary number of modules of the plurality of modules are attached, directly or indirectly, to the first module, the circuitry determines an order and the identities of all attached modules.
2. The apparatus of claim 1 wherein the arbitrary number is greater than one.
3. The apparatus of claim 2 wherein any module can be attached to:
 - the first base, or
 - one other module, or
 - the first base and one other module, or
 - two other modules, or
 - the first base and a second base.
4. The apparatus of claim 1 wherein only one module can be directly attached to the first base at a time.
5. The apparatus of claim 1 wherein more than one module can be directly attached to the first base at a time.
6. The apparatus of claim 1 wherein the identity of each module is stored within that module.
7. The apparatus of claim 6 wherein the identity of at least one module is stored by analog means.

8. The apparatus of claim 7 wherein the analog means of storing the identity of at least one module comprises a resistor.
9. The apparatus of claim 6 wherein the identity of at least one module is stored by digital means.
10. The apparatus of claim 7 wherein the digital means of storing the identity of at least one module comprises jumpers or switches.
11. The apparatus of claim 7 wherein the digital means of storing the identity of at least one module comprises a memory device.
12. The apparatus of claim 6 wherein the identity of at least one module corresponds to a letter.
13. The apparatus of claim 6 wherein the identity of at least one module corresponds to a number.
14. The apparatus of claim 6 wherein the identity of at least one module corresponds to an image.
15. The apparatus of claim 6 wherein the identity of at least one module corresponds to a word.
16. The apparatus of claim 6 wherein the identity of at least one module corresponds to a color.
17. The apparatus of claim 6 wherein the identity of at least one module corresponds to a sound.

18. The apparatus of claim 17 wherein the identity of at least one module corresponds to a musical tone.
19. An apparatus comprising:
 - a first base;
 - a plurality of modules, each having an identity and being directly attachable to the first base or other modules; and
 - circuitry, wherein the circuitry determines an order and the identities of all contiguously attached modules when one of the modules is attached to the first base.
20. The apparatus of claim 19, wherein the first base and the modules comprise the circuitry.
21. The apparatus of claim 20, wherein the identity of a module is stored by analog means.
22. The apparatus of claim 21, wherein the analog means comprise a resistor within the module.
23. The apparatus of claim 20, wherein the identity of a module is stored by digital means.
24. The apparatus of claim 23, wherein the digital means comprise jumpers or switches.
25. The apparatus of claim 23, wherein the digital means comprise a memory device.
26. A method of identifying order and number of modules in a sequence of modules attached to a base, each module having an identity, the method comprising:
 - the base initiating an identification sequence; and
 - each module providing its identity, wherein

only one module of the sequence is directly attached to the base.

27. The method of claim 26 wherein:

the step of the base initiating an identification sequence comprises the base
activating a first module, causing it to become the active module; and
the step of each module providing its identity comprises:

- 1) the active module identifying itself; and,
- 2) for each remaining module of the train until the end of the string:
the active module activating its following module, making itself
inactive and making the following module become the active
module; and
the active module identifying itself.

28. The method of claim 27 wherein the step of a module providing its identity
comprises using analog means.

29. The method of claim 28 wherein the analog means comprise a resistor

30. The method of claim 27 wherein the active module turns on a light within the
module while it is the active module.

31. The method of claim 26 wherein:

the sequence of modules comprises a shift register chain, and the step of each
module providing its identity comprises loading its identity into the shift
register chain.

32. The method of claim 31, wherein the method further comprises, after the step of each
module providing its identity, the module identities in the shift register chain being
shifted into the base.

33. The method of claim 32, wherein the identity of at least one module is stored in jumpers or switches.
34. The method of claim 33, wherein the identity of at least one module is stored in a memory device.
35. The method of claim 27 wherein the step of a module providing its identity comprises using digital means.
36. The method of claim 27 wherein at least one module provides other digital information along with its identity.